

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A removable processing cap assembly comprising:
a cap comprising a housing adjoined to a conformable section, said conformable section having [a] an internal recess for engaging with a stopper and for sealing [to] around a container opening, and a vapor path opening for vapor passage between the container and an external atmosphere;
a venting media [attached to the cap and] oriented in said vapor path forming a barrier isolating the container from the external atmosphere;
a stopper seated in a first position within the processing cap adjacent the recess, said first position allowing passage of vapor between the container opening and the external atmosphere;
said stopper being movable to a second position in the container to close the container opening and prevent the passage of vapor
wherein said cap and venting media are able to be removed from the stoppered container.
2. (Original) The cap assembly of claim 1, wherein said cap is hermetically sealed to said container.
3. (Original) The cap assembly of claim 1, wherein said cap comprises a single material.
4. (Original) The cap assembly of claim 1, wherein said cap comprises at least two components.
5. (Original) The cap assembly of claim 4, wherein said cap assembly comprises a rigid section and a conformable section.
6. (Original) The cap assembly of claim 1, wherein said venting media comprises a hydrophobic material.
7. (Previously presented) The cap assembly of claim 1, wherein said venting media comprises expanded polytetrafluoroethylene.

8. (Currently amended) A cap assembly for the isolation of contents in a stoppered container comprising:

a cap having (a) a housing adjoined to a conformable section with an interior recess adapted for sealing [to] around an exterior opening of a container and for [maintaining] surrounding a stopper in the recess over the container, and (b) a vapor path opening for vapor passage between the container and an external atmosphere; and

a venting media [attached to the cap and] oriented in said vapor path and external to said container opening forming a barrier isolating the container from the external atmosphere,

said cap assembly being adapted for maintaining the stopper in a first position which allows passage of vapor between said container and the external atmosphere and moving said stopper to a second position to close the container and prevent the passage of vapor, wherein the cap and venting media are further removable from the closed container.

9. (Original) The cap assembly of claim 8, wherein said cap is hermetically sealed to said container.

10. (Original) The cap assembly of claim 8, wherein said cap comprises a single material.

11. (Original) The cap assembly of claim 8, wherein said cap comprises at least two components.

12. (Original) The cap assembly of claim 11, wherein said cap assembly comprises a rigid section and a conformable section.

13. (Original) The cap assembly of claim 8, wherein said venting media comprises a hydrophobic material.

14. (Previously presented) The cap assembly of claim 8, wherein said venting media comprises expanded polytetrafluoroethylene.

15. (Currently amended) A cap assembly for the isolation of contents of at least one vial located in a container, comprising

a [cap] removable cover having (a) a recess for sealing to the container and for maintaining at least one stopper over the at least one vial located in the container, and (b) a vapor path opening for vapor passage between the at least one vial in the container and an external atmosphere;

a venting media attached to the cap and oriented in said vapor path forming a barrier isolating the container and the at least one vial located therein from the external atmosphere;

said cap assembly being adapted for maintaining the at least one stopper in a first position which allows passage of vapor between said at least one vial and the external atmosphere and moving said at least one stopper to a second position in the at least one vial to close the vapor path and prevent the passage of vapor resulting in a sealed vial prior to removal of said cover.

16. (Original) The cap assembly of claim 15, wherein said cap is hermetically sealed to said container.

17. (Original) The cap assembly of claim 15, wherein said cap comprises a single material.

18. (Original) The cap assembly of claim 15, wherein said cap comprises at least two components.

19. (Original) The cap assembly of claim 18, wherein said cap assembly comprises a rigid section and a conformable section.

20. (Original) The cap assembly of claim 15, wherein said venting media comprises a hydrophobic material.

21. (Original) The cap assembly of claim 15, wherein said venting media comprises expanded PTFE.

22. (Currently amended) A method for isolating and processing contents in a container comprising:

providing a removable cap assembly comprising (1) a cap having (a) a recess adapted for sealing to a container and for maintaining a stopper over the container, and (b) a vapor path opening for vapor passage between the container and an external atmosphere; and (2) a venting media attached to the cap and oriented in said vapor path forming a barrier for isolating the container from the external atmosphere, said cap assembly being adapted for maintaining the stopper in a first position which allows passage of vapor between said container and the external atmosphere and moving said stopper to a second position to close the container and prevent the passage of vapor;

sealing said cap assembly to the container having therein material to be processed with the stopper oriented in the first position to allow passage of vapor between said container and the external atmosphere;

processing the material in the container; [and]

moving said cap assembly and said stopper to a second position to close the container and prevent the passage of vapor; and

removing said cap assembly from the closed container.

23. (Original) The method of claim 22, wherein said attaching provides a hermetic seal between said cap assembly and said container.

24. (Original) The method of claim 22, wherein said processing comprises at least one method selected from the group consisting of evaporative drying, sublimation drying, cell culturing, fumigation, mixing under controlled atmosphere and reacting under controlled atmosphere.

25. (Original) The method of claim 22, wherein said processing comprises freeze-drying.

26. (Original) The method of claim 22, wherein said stopper is held within said cap assembly.

27. (New) A cap assembly comprising:

a multiple component body including a removable housing sealed to a conformable base having a recess for sealing to an internally housed container and a vapor path opening for vapor passage between the container and an external atmosphere; and

a venting media configured to seal with the conformable base of the body and oriented in said vapor path forming a barrier isolating the container from the external atmosphere, during drying processes.

28. (New) The cap assembly of claim 27 further comprising a top covering.

29. (New) The cap assembly of claim 28 wherein the top covering is sealed to the venting media.

30. (New) The cap assembly of claim 28 further comprising a gasket between the top covering and the venting media.

31. (New) A cap assembly for a ready to fill vial comprising:

a multi component cap comprising a housing sealed to a section having a recess for sealing to a container and a vapor path opening for vapor passage between the container and an external atmosphere;

a venting media configured to seal with the housing of the cap and oriented in said vapor path forming a barrier isolating the container from the external atmosphere; and

a self-sealing stopper seated in a first position for maintaining a seal with the vial, said first position further allowing the vial to be pierced and filled with a liquid; said stopper being movable to a second position to allow passage of vapor between the container and the external atmosphere.

32. (New) A removable sealing and barrier device compatible with stopper and vial assemblies comprising:

a cap comprising a removable housing sealed to a conformable section having an internal recess for sealing around a container opening and a vapor path opening for vapor passage between the container opening an external atmosphere; and

a venting media configured to seal with the housing of the cap and oriented in said vapor path forming a barrier isolating the container from the external atmosphere; and

a self-sealing stopper within the internal recess of the cap and seated in a first position for maintaining a seal with the vial, said stopper being modulated to a second position to allow passage of vapor between the container and the external atmosphere, wherein said venting media is removable to expose sealed stopper.

33. (New) A processing cap assembly comprising:

a cap having an interior recess adapted for sealing around a container opening and for positioning a stopper in proximity to the container opening, said cap providing a vapor path opening for vapor passage between the container and an external atmosphere when the container is in an unsealed state;

a venting media configured to seal with the cap and oriented in said vapor path forming a barrier isolating the container from the external atmosphere; and

a lid sealed to the venting media.

34. (New) The removable processing cap of claim 33 wherein the lid is sealed to the media via a heat seal.

35. (New) The removable processing cap of claim 33 wherein the lid is sealed to the media via a gasket seal.

36. (New) The processing cap of claim 33 wherein the venting media comprises polytetrafluoroethylene.